WHAT IS CLAIMED IS:

1   1.   A method for improving a network connection in a

2   wireless network, said method comprising the steps of:

3   determining at least one quality measure for a channel

4   of said network connection;

5   estimating a quality condition for said channel based

6   on said at least one quality measure; and

7   selecting a packet type to be transmitted over said

8   channel based on said quality condition.

1   2.   The method according to claim 1, wherein said at

2   least one quality measure is determined from a receiver side

3   in said network.

1   3.   The method according to claim 1, wherein said at

2   least one quality measure is determined from a transmitter

3   side in said network.

1   4.   The method according to claim 3, wherein said step

2   of estimating a quality condition comprises ignoring receiver

3   side quality measures and using only quality measures

4   determined from said transmitter side.

1   5.   The method according to claim 1, wherein which one

2   of said at least one quality measure is determined varies

3   depending on a previously selected packet type.

1   6.   The method according to claim 1, wherein an uncoded

2   packet type is selected if said channel is primarily

3   interference limited.

1   7.   The method according to claim 1, wherein a coded

2   packet type is selected if said channel is primarily noise

3   limited.

1   8.   The method according to claim 1, wherein a

2   relatively short packet type is selected if said channel has

3   a high bit error rate.

1   9.   The method according to claim 1, wherein a

2   relatively long, uncoded packet type is selected if said

3   channel is neither interference limited nor noise limited.

1   10.   The method according to claim 1, wherein said

2   selected packet type is the same as a previously selected

3   packet type.

1   11.   The method according to claim 1, wherein said

2   selected packet type is different from a previously selected

3   packet type.

1   12.   The method according to claim 1, wherein said

2   network is an ad hoc network.

1   13.   The method according to claim 1, wherein said

2   network is a Bluetooth (TM) wireless network.

1   14.   The method according to claim 1, wherein said step

2   of estimating said quality condition includes comparing said

3   at least one quality measure to a predefined value.

1   15.   The method according to claim 1, wherein said step

2   of selecting a packet type includes waiting for a predefined

3   time period before selecting said packet type.

1   16. The method according to claim 1, wherein at least

2 an error detection quality measure is used to estimate said

3 channel condition.

1   17. The method according to claim 1, wherein at least

2 a Forward Error Correction quality measure and an error

3 detection quality measure are used to estimate said channel

4 condition.

1   18. The method according to claim 1, wherein at least

2 a received signal strength quality measure and an error

3 detection quality measure are used to estimate said channel

4 condition.

1   19. The method according to claim 1, wherein at least

2 a packets positively acknowledged quality measure and a power

3 amplifier voltage are used to estimate said channel

4 condition.

1   20. The method according to claim 19, wherein said

2 packets positively acknowledged quality measure and said

3 power amplifier voltage are determined based partly on at

4   least one of an error detection quality measure, a Forward

5   Error Correction quality measure, and a received signal

6   strength quality measure.

1   21. A communications device for communicating over a

2   network connection in a wireless network, said device

3   comprising:

4   a channel quality processor for determining at least one

5   quality measure of a channel of said network connection;

6   a channel condition processor coupled to said channel

7   quality processor for estimating a quality condition of said

8   channel based on said at least one quality measure; and

9   a packet type selector coupled to the channel condition

10   processor for selecting a packet type to be transmitted over

11   said channel based on said quality condition of said channel.

1   22. The communications device according to claim 21,

2   further comprising a receiver unit, wherein said at least one

3   quality measure is determined based on information obtained

4   from said receiver unit.

1   23.   The communications device according to claim 21,

2   further comprising a transmitter unit, wherein said at least

3   one quality measure is determined based on information

4   obtained from said transmitter unit.

1   24.   The communications device according to claim 23,

2   wherein said channel condition processor is configured to

3   ignore receiver side quality measures and to use only quality

4   measures determined based on information obtained from said

5   transmitter unit.

1   25.   The communications device according to claim 21,

2   wherein which one of said at least one quality measure is

3   determined varies depending on a previously selected packet

4   type.

1   26.   The communications device according to claim 21,

2   wherein said packet type selector selects an uncoded packet

3   type if said channel condition processor determines that said

4   channel is primarily interference limited.

1   27.   The communications device according to claim 21,

2   wherein said packet type selector selects a coded packet type

3   if said channel condition processor determines that said

4   channel is primarily noise limited.

1   28.   The communications device according to claim 21,

2   wherein said packet type selector selects a relatively short

3   packet type if said channel condition processor determines

4   that said channel has a high bit error rate.

1   29.   The communications device according to claim 21,

2   wherein said packet type selector selects a relatively long,

3   uncoded packet type if said channel condition processor

4   determines that said channel is neither interference limited

5   nor noise limited.

1   30.   The communications device according to claim 21,

2   wherein said selected packet type is the same as a previously

3   selected packet type.

1   31. The communications device according to claim 21,

2 wherein said selected packet type is different from a

3 previously selected packet type.

1   32. The communications device according to claim 21,

2 wherein said network is an ad hoc network.

1   33. The communications device according to claim 21,

2 wherein said network is a Bluetooth (TM) wireless network.

1   34. The communications device according to claim 21,

2 wherein said channel condition processor is configured to

3 compare said at least one quality measure to a predefined

4 value.

1   35. The communications device according to claim 21,

2 further comprising a timer, wherein said packet type selector

3 is adapted to wait for said timer to expire before selecting

4 said packet type.

1   36.   The communications device according to claim 21,

2   wherein at least an error detection quality measure is used

3   to estimate said channel condition.

1   37.   The communications device according to claim 21,

2   wherein at least a Forward Error Correction quality measure

3   and an error detection quality measure are used to estimate

4   said channel condition.

1   38.   The communications device according to claim 21,

2   wherein at least a received signal strength quality measure

3   and an error detection quality measure are used to estimate

4   said channel condition.

1   39.   The communications device according to claim 21,

2   wherein at least a packets positively acknowledged quality

3   measure and a power amplifier voltage are used to estimate

4   said channel condition.

1   40.   The communications device according to claim 39,

2   wherein said packets positively acknowledged quality measure

3   and said power amplifier voltage are determined based partly

4   on at least one of an error detection quality measure, a

5   Forward Error Correction quality measure, and a received

6   signal strength quality measure.